AUTHOR INDEX

Ahn, K.S., R.A. Carranza, D. Elwell and R.S. Feigelson, Crystal growth of cesium cadmium chloride $CsCdCl_3$ 50 (1980) 775
Antonov, P.I. and S.P. Nikanorov, Physical problems in crystal growth by the Stepanov method 50 (1980) 3
Antonov, P.I., S.I. Bakholdin, E.A. Tropp and V.S. Yuferev, An experimental and theoretical study of temperature distribution in sapphire crystals grown from the melt by Stepanov's method 50 (1980) 62
Antonov, P.I., see Levinson 50 (1980) 320
Antonov, F.I., E.V. Galactionov, V.M. Krymov, E.N. Kolesnikova and V.S. Yuferev, The formation of a dislocation structure in ribbon-shaped germanium single crystals under thermal stress 50 (1980) 325

Babkin, G.I., E.A. Brener and V.A. Tatarchenko, Crystallization stability during capillary shaping. II. Capillary stability for arbitrary small perturbations 50 (1980) 45
Baghdadi, A. and R.W. Gurtler, Recent advances in ribbon-to-ribbon crystal growth 50 (1980) 236
Bagraev, N.T., L.S. Vlasenko and Yu.A. Karpov, ONP investigation of cluster formation in doped silicon single crystals grown by the Czochralski method 50 (1980) 764
Bakholdin, S.I., see Antonov 50 (1980) 62
Bando, Y., see Shigematsu 50 (1980) 801
Barns, R.L., see Kolb 50 (1980) 404
Bartholomew, D.M.L. and A. Hellawell, Changes of growth conditions in the vertical Bridgman–Stockbarger method for the solidification of aluminum 50 (1980) 453
Bauser, E. and W. Hagen, X-ray topography of growth step sources in LPE gallium arsenide 50 (1980) 771
Beben, J., see Biernat 50 (1980) 521
Belouet, C., Growth of polysilicon sheets by the RAD process 50 (1980) 279
Benn, S., see Mullin 50 (1980) 625
Bergin, D.O., Shaped crystal growth – a selected bibliography 50 (1980) 381
Berkman, S., see Novak 50 (1980) 143
Berkman, S., see Kim 50 (1980) 212
Berkman, S., see Duffy 50 (1980) 347
Beyss, M., J.-M. Welter and T. Kaiser, Growth and characterization of pure and doped RE–Al_2 Laves phases 50 (1980) 419
Biernat, T., J. Beben and A. Ciszewski, Favourable growth conditions of potassium epitaxial layers on tungsten FEM emitter 50 (1980) 521
Binsma, J.J.M., L.J. Giling and J. Bloem, Phase relations in the system Cu_2S–In_2S_3 50 (1980) 429
Bloem, J., see Binsma 50 (1980) 429
Bloem, J., Nucleation and growth of silicon by CVD 50 (1980) 575
Bloem, J., see Claassen 50 (1980) 807
Brener, E.A., see Tatarchenko 50 (1980) 33
Brener, E.A., see Babkin 50 (1980) 45
Brozel, M.R., K. Laithwaite, R.C. Newman and B. Özbay, The properties of gallium arsenide doubly doped with silicon and germanium or silicon and tin 50 (1980) 619

Cadoret, M., see Laporte 50 (1980) 663
Cadoret, R., see Laporte 50 (1980) 663
Carranza, R.A., see Ahn 50 (1980) 775
Chalmers, B., see Surek 50 (1980) 21
Chao-yang Hou, see Hou Chao-yang 50 (1980) 757
Cheynet, M.C., see Lemaignan 50 (1980) 720
Ciszek, T.F., G.H. Schwuttke and K.H. Yang, Factors influencing surface quality and impurity distribution in silicon ribbons growth by the capillary action shaping technique (CAST) 50 (1980) 160
Ciszek, T.F., see Yang 50 (1980) 301
Ciszewski, A., see Biernat 50 (1980) 521
Claassen, W.A.P. and J. Bloem, Rate-determining reactions and surface species in CVD of silicon. II. The SiH_2Cl_2–H_2–N_2–HCl system 50 (1980) 807

Clark, P.A. and W.R. Wilcox, Influence of gravity on thermocapillary convection in floating zone melting of silicon 50 (1980) 461
Clyne, T.W., Heat flow in controlled directional solidification of metals. I. Experimental investigation 50 (1980) 684
Clyne, T.W., Heat flow in controlled directional solidification of metals. II. Mathematical model 50 (1980) 691
Coriell, S.R., see Surek 50 (1980) 21
Cretella, M.C., see Rao 50 (1980) 311
Cross, L.E., see Setter 50 (1980) 555
Cullen, G.W., see Kim 50 (1980) 212
Cullen, G.W., see Duffy 50 (1980) 347

Dabrowski, A.J., see Faile 50 (1980) 752
D'Aiello, R.V., see Duffy 50 (1980) 347
Davies, G.J., see Heckingbottom 50 (1980) 644
DePasquali, G., see Lenahan 50 (1980) 739
Desai, C.C. and J.L. Rai, Growth of SnI_2 and SnI_4 single crystals in silica gels 50 (1980) 562
Digges, Jr., T.G. and R. Shima, The effect of growth rate, diameter and impurity concentration on structure in Czochralski silicon crystal growth 50 (1980) 865
Dobrovinskaya, E.R., L.A. Litvinov and V.V. Pishchik, Morphology and structural perfection of shaped sapphire 50 (1980) 341
Dreeben, A.B., K.M. Kim and A. Schujko, Measurement of meniscus angle in laser heated float zone growth of constant diameter sapphire crystals 50 (1980) 126
Dreeben, A., see Novak 50 (1980) 143
Duffy, M.T., S. Berkman, G.W. Cullen, K.V. D'Aiello and H.I. Moss, Development and evaluation of refractory CVD coatings as contact materials for molten silicon 50 (1980) 347
Dufour, L.-C., see Jouini 50 (1980) 873
Dynowska, E., see Kosacki 50 (1980) 575

Egorov, L.P., see Tatarchenko 50 (1980) 335
Elwell, D., see Ahn 50 (1980) 775
Eriss, L., R.W. Stormont, T. Surek and A.S. Taylor, The growth of silicon tubes by the EFG process 50 (1980) 200
Escher, J.S., see Saxena 50 (1980) 481
Eustathopoulos, N., see Lemaignan 50 (1980) 720

Faile, S.P., A.J. Dabrowski, G.C. Huth and J.S. Iwanczyk, Mercuric iodide (HgI_2) platelets for X-ray spectroscopy produced by polymer controlled growth 50 (1980) 752
Farr, B.J., see Sekerka 50 (1980) 783
Feigelson, R.S., see Ahn 50 (1980) 775
Fewster, P.F. and A.F.W. Willoughby, The effect of silicon doping on the lattice parameter of gallium arsenide grown by liquid-phase epitaxy, vapour-phase epitaxy and gradient-freeze techniques 50 (1980) 648
Finzel, H.-U., Transport von Zn_3P_2 durch Gasphasenreaktion 50 (1980) 823
Fukuda, T., and H. Hirano, $LiNbO_3$ and $LiTaO_3$ growth by the capillary liquid epitaxial technique 50 (1980) 291
Furukoshi, M., see Kikuma 50 (1980) 654

Galactionov, E.V., see Antonov 50 (1980) 325
Giling, L.J., see Binsma 50 (1980) 429
Grange, J.D., see Meggitt 50 (1980) 538
Greene, P.D., Growth of GaAs ingots with high free electron concentrations 50 (1980) 612
Gregory, P.E., see Saxena 50 (1980) 481
Grenier, J.C., see Kolb 50 (1980) 404
Griner, C.S., see Johnston 50 (1980) 831
Grosser, B., see Stock 50 (1980) 485
Grung, B.L., see Zook 50 (1980) 260
Guittard, P., see Jarry 50 (1980) 877
Gunn, D.J., Effect of surface roughness on the nucleation and growth of calcium sulphate on metal surfaces 50 (1980) 533
Gurtler, R.W., Nature of thermal stresses and potential for reduced thermal buckling of thin silicon ribbon grown at high speed 50 (1980) 69
Gurtler, R.W., see Baghdadi 50 (1980) 236

Hagan, M.A., see Leipold 50 (1980) 366
Hagen, W., see Bauser 50 (1980) 771
Hartzell, R.A., see Sekerka 50 (1980) 783
Heckingbottom, R. and G.J. Davies, Germanium doping of gallium arsenide grown by molecular beam epitaxy – some thermodynamic aspects 50 (1980) 644
Hellawell, A., see Bartholomew 50 (1980) 453
Heyraud, J.C. and J.J. Métois, Establishment of the equilibrium shape of metal crystallites on a foreign substrate: gold on graphite 50 (1980) 571
Hirahara, K., see Kotake 50 (1980) 743
Hirano, H., see Fukuda 50 (1980) 291
Hopkins, R.H., see Seidensticker 50 (1980) 221
Horak, A., see Miotkowski 50 (1980) 567
Hoshikawa, K., see Wada 50 (1980) 151
Hou Chao-yang, Study of growth habit of $LiTaO_3$ single crystals 50 (1980) 757
Hurle, D.T.J., The site distribution of amphoteric dopants in multiply-doped GaAs 50 (1980) 638
Huth, G.C., see Faile 50 (1980) 752
Hyder, S.B., see Saxena 50 (1980) 481

Iijima, S., Direct observation of the tetrahedral bonding in graphitized carbon black by high resolution electron microscopy 50 (1980) 675
Inomata, Y., see Inoue 50 (1980) 779
Inoue, Z. and Y. Inomata, Thermal stability of the long-period polytype of SiC, 51R, at 2500°C 50 (1980) 779
Ito, S., M. Miyashita and N. Yoneda, Crystal growth of α-Fe_2O_3 by vapor phase reaction method 50 (1980) 767
Iwanaga, H., T. Yoshiie, T. Yamaguchi and N. Shibata, Polarity of CdS crystals growing in atmosphere of excess Cd or S vapor 50 (1980) 552
Iwanczyk, J.S., see Faile 50 (1980) 752
Iwasaki, H., see Kondo 50 (1980) 605
Izumi, F., see Kodama 50 (1980) 515

Jacobs, K. and W. Seifert, The influence of ammonia on the growth rate in the vapour phase epitaxy of gallium phosphide 50 (1980) 701
Jain, S.C., see Muralidharan 50 (1980) 707
Jarry, P., P. Guittard and C. Piaget, Improvement to the final wipe-off in LPE of GaAs/(Ga,Al)As double heterostructures 50 (1980) 877
Johnston, M.H., C.S. Griner, R.A. Parr and S.J. Robertson, The direct observation of unidirectional solidification as a function of gravity level 50 (1980) 831
Jouini, A. and L.-C. Dufour, Application de la technique de la zone fondue flottante à la croissance de monocristaux de $Co_xNi_{1-x}O$ 50 (1980) 873

Kachare, A.H., see Lane 50 (1980) 437
Kaiser, T., see Beyss 50 (1980) 419
Kalejs, J.P., B.H. Mackintosh and T. Surek, High speed EFG of wide silicon ribbon 50 (1980) 175
Karpov, Yu.A., see Bagraev 50 (1980) 764
Kato, E., see Murase 50 (1980) 509
Kikuma, I. and M. Furukoshi, Solution growth of ZnSe crystals using In–Zn solvents 50 (1980) 654
Kim, C.J., see Nonaka 50 (1980) 549
Kim, K.M., see Dreeben 50 (1980) 126
Kim, K.M., S. Berkman, H.E. Temple and G.W. Cullen, Growth and characterization of silicon ribbons by the inverted Stepanov process using pyrolytic boron nitride die 50 (1980) 212
Kim, K.M., see Novak 50 (1980) 330
King, R.M., see Meggitt 50 (1980) 538
Kodama, H. and F. Izumi, Crystallization of γ-Bi_2MoO_6 under hydrothermal conditions 50 (1980) 515
Koepke, B.G., see Zook 50 (1980) 260
Kolb, E.D., R.L. Barns, R.A. Laudise and J.C. Grenier, Solubility, crystal growth and perfection of aluminum orthophosphate 50 (1980) 404
Kolesnikova, E.N., see Antonov 50 (1980) 325
Kölker, H., The behaviour of nonrotational striations in silicon 50 (1980) 852

Kondo, S., S. Miyazawa, K. Sugii and H. Iwasaki, Refractive indices and surface morphology of LPE grown Li(Nb,Ta)O_3 films on $LiTaO_3$ substrates 50 (1980) 605
Kosacki, I. and E. Dynowska, Preparation and structure of mixed $Cd_{1-x}Pb_xF_2$ crystals 50 (1980) 575
Kotake, H., K. Hirahara and M. Watanabe, Quantitative photoelastic measurement of residual stress in LEC grown GaP crystals 50 (1980) 743
Kravetsky, D.Ya., see Tatarchenko 50 (1980) 335
Krymov, V.M., see Antonov 50 (1980) 325
Kudo, B., Improvements in the horizontal ribbon growth technique for single crystal silicon 50 (1980) 247
Kuroda, E., M. Matsuda and M. Maki, Growth of 10 cm wide silicon ribbon 50 (1980) 193
Kuroda, T., see Shiomi 50 (1980) 397
Kutty, T.R.N., see Tareen 50 (1980) 527

Labelle, H.E., Jr., EFG, the invention and application to sapphire growth 50 (1980) 8
Laithwaite, K., see Brozel 50 (1980) 619
Lane, R.L. and A.H. Kachare, Multiple Czochralski growth of silicon crystals from a single crucible 50 (1980) 437
Laporte, J.L., M. Cadoret and R. Cadoret, Investigation of the parameters which control the growth of {111} and $\{\bar{1}\bar{1}\bar{1}\}$ faces of GaAs by chemical vapour deposit 50 (1980) 663
Laudise, R.A., see Kolb 50 (1980) 404
Lazarev, V.B., see Marenkin 50 (1980) 761
Leipold, M.H., see Zook 50 (1980) 260
Leipold, M.H., T.P. O'Donnell and M.A. Hagan, Materials of construction for silicon crystal growth 50 (1980) 366
Lemaignan, C., M.C. Cheynet and N. Eustathopoulos, Nucleation behaviour of silver–germanium eutectic alloys 50 (1980) 720
Lenahan, P.M. and G. DePasquali, Growth and characterization of large crystals of methyltriphenylarsenium tetracyanoquinodimethane [$Me\phi_3As(TNCQ)_2$] 50 (1980) 739
Levinson, D.I., and P.I. Antonov, On the impurity distribution in germanium single crystals grown by Stepanov's method 50 (1980) 320
Le Shou-hong, see Zang Shou qing 50 (1980) 659
Liang-an Tang, see Tang Liang-an 50 (1980) 659
Litvinov, L.A., see Dobrovinskaya 50 (1980) 341
Liu, C.H., see Rhodes 50 (1980) 94
Loison, J.L., M. Robino and C. Schwab, Progress in melt growth of Cu_2O 50 (1980) 816

Mackintosh, B.H., see Kalejs 50 (1980) 175
Maki, M., see Kuroda 50 (1980) 193
Marenkin, S.F., V.B. Lazarev, V.Y. Shevchenko and K.A. Sokolovsky, The growth of $CdAs_2$ and $ZnAs_2$ single crystals by directed zone melting recrystallization 50 (1980) 761
Matsuda, M., see Kuroda 50 (1980) 193
Meggitt, B.T., E.H.C. Parker, R.M. King and J.D. Grange, Electrical and structural properties of InAs layers on (100)GaAs substrates prepared by molecular beam deposition 50 (1980) 538
Métois, J.J., see Heyraud 50 (1980) 571
Metzl, R., see Novak 50 (1980) 143
Miotkowska, S., see Miotkowski 50 (1980) 567
Miotkowski, I., S. Miotkowska and A. Horak, Solution growth $CdGeP_2$ crystals and layers 50 (1980) 567
Miyashita, H., see Ito 50 (1980) 767
Miyazawa, S., see Kondo 50 (1980) 605
Moss, H.I., see Duffy 50 (1980) 347
Motojima, S., see Takahashi 50 (1980) 491
Mullin, J.B., A. Royle and S. Benn, A study on the relationship between growth technique and dopants on the electrical properties of GaAs with special reference to LEC growth 50 (1980) 625
Muralidharan, R. and S.C. Jain, Improvements in the theory of growth of LPE layers of GaAs and interpreparation of recent experiments 50 (1980) 707
Murase, Y. and E. Kato, Thermal changes in texture of aggregates of ultra-fine crystallites in hydrolysed zirconia particles 50 (1980) 509

Newman, R.C., see Brozel 50 (1980) 619
Nikanorov, S.P., see Antonov 50 (1980) 1
Nistor, L.C., S.V. Nistor and M.I. Toacsan, Characterization of cubic ZnS crystals grown from flux 50 (1980) 557

Nistor, S.V., see Nistor 50 (1980) 557
Nonaka, K., C.J. Kim and K. Shohno, Multilayer epitaxial growth of BP and Si on Si substrates 50 (1980) 549
Novak, R.E., R. Metzl, A. Dreeben, S. Berkman and D.L. Patterson, The production of EFG sapphire ribbon for heteroepitaxial silicon substrates 50 (1980) 143
Novak, R.E. and K.M. Kim, Dislocations in $\{\bar{1}012\}$ sapphire ribbons grown by the EFG process 50 (1980) 330

O'Donnell, T.P., see Leipold 50 (1980) 366
Ogawa, T., see Shiomi 50 (1980) 397
Özbay, B., see Brozel 50 (1980) 619

Pandya, G.R. and D.D. Vyas, Crystallization of glycine–sulfate 50 (1980) 870
Parker, E.H.C., see Meggitt 50 (1980) 538
Parr, R.A., see Johnston 50 (1980) 831
Patterson, D.L., see Novak 50 (1980) 143
Piaget, C., see Jarry 50 (1980) 877
Pishchik, V.V., see Dobrovinskaya 50 (1980) 341

Rai, J.L., see Desai 50 (1980) 562
Rao, C.V.H.N., M.C. Cretella, F.V. Wald and K.V. Ravi, Imperfections and impurities in EFG silicon ribbons 50 (1980) 311
Ravi, K.V., see Rao 50 (1980) 311
Reddy. M.M. and K.K. Wang, Crystallization of calcium carbonate in the presence of metal ions. I. Inhibition by magnesium ion at pH 8.8 and 25°C 50 (1980) 470
Rhodes, C.A., M.M. Sarraf and C.H. Liu, Investigation of the meniscus stability in horizontal crystal ribbon growth 50 (1980) 94
Robertson, S.J., see Johnston 50 (1980) 831
Robino, M., see Loison 50 (1980) 816
Royle, A., see Mullin 50 (1980) 625

Sachs, E.M., Thermal sensitivity and stability of EFG silicon ribbon growth 50 (1980) 102
Sachs, E.M. and R. Surek, Dynamics and control of meniscus height in ribbon growth by the EFG method 50 (1980) 114
Sankaran, R., Te doping of vapor phase expitaxial GaAs 50 (1980) 859
Sarraf, M.M., see Rhodes 50 (1980) 94
Satunkin, G.A., V.A. Tatarchenko and V.I. Shaitanov, Determination of the growth angle from the shape of a crystal lateral face and solidified separation drops 50 (1980) 133
Satunkin, G.A., see Tatarchenko 50 (1980) 335
Saxena, R.R., S.B. Hyder, P.E. Gregory and J.S. Escher, Vapor phase epitaxial growth of InGaAs/InAsP heterojunctions for long wavelength transferred electron photocathodes 50 (1980) 481
Schujko, A., see Dreeben 50 (1980) 126
Schuldt, S.B., see Zook 50 (1980) 51
Schwab, C., see Loison 50 (1980) 816
Schwuttke, G.H., see Ciszek 50 (1980) 160
Schwuttke, G.H., see Yang 50 (1980) 301
Seidensticker, R.G. and R.H. Hopkins, Silicon ribbon growth by the dendritic web process 50 (1980) 221
Seifert, W., see Jacobs 50 (1980) 701
Sekerka, R.F., R.A. Hartzell and B.J. Farr, Instability phenomena during the RF heating and melting of ceramics 50 (1980) 783
Sekovanić, L., see Subotić 50 (1980) 498
Setter, N. and L.E. Cross, Flux growth of lead scandium tantalate $Pb(Sc_{0.5}Ta_{0.5})O_3$ and lead magnesium niobate $Pb(Mg_{1/3}Nb_{2/3})O_3$ single crystals 50 (1980) 555
Shaitanov, V.I., see Satunkin 50 (1980) 133
Shevchenko, V.Y., see Marenkin 50 (1980) 761
Shibata, N., see Iwanaga 50 (1980) 552
Shigematsu, T., H. Ushigome, Y. Bando and T. Takada, Epitaxial growth of magnetic on rock salt by reactive evaporation 50 (1980) 801
Shima, R., see Digges, Jr. 50 (1980) 865
Shindo, I., Determination of the phase diagram by the slow cooling float zone method: the system MgO-TiO_2 50 (1980) 839
Shiomi, Y., T. Kuroda and T. Ogawa, Thermal analysis of a growing crystal in an aqueous solution 50 (1980) 397

Shohno, K., see Nonaka 50 (1980) 549
Shou-hong Le, see Le Shou-hong 50 (1980) 659
Shou-qing Zang, see Zang Shou-qing 50 (1980) 659
Škrtić, D., see Subotić 50 (1980) 498
Šmit, I., see Subotić 50 (1980) 498
Smith, D.A., see Spiller 50 (1980) 445
Sokolovsky, K.A., see Marenkin 50 (1980) 761
Spiller, G.D.T. and D.A. Smith, A transmission electron microscope study of a directionally solidified γ/γ'-Cr_3C_2 eutectic 50 (1980) 445
Stock, K.D. and B. Grosser, Topography and surface melt on spherical gold crystals after purification by a pre-melt in air 50 (1980) 485
Stormont, R.W., see Eriss 50 (1980) 200
Subotić, B., D. Škrtić, I. Šmit and L. Sekovanić, Transformation of zeolite A into hydroxysodalite 50 (1980) 498
Sugii, K., see Kondo 50 (1980) 605
Sugiura, M., see Takahashi 50 (1980) 491
Sugiyama, K., see Takahashi 50 (1980) 491
Surek, T., S.R. Coriell and B. Chalmers, The growth of shaped crystals from the melt 50 (1980) 21
Surek, T., see Sachs 50 (1980) 114
Surek, T., see Kalejs 50 (1980) 175
Surek, T., see Eriss 50 (1980) 200

Takada, T., see Shigematsu 50 (1980) 801
Takahashi, Y., R. Yuki, M. Sugiura, S. Motojima and K. Sugiyama, Vapor deposition of thin cadmium sulfide layers using thermal decomposition of dithiolatocadmium complexes 50 (1980) 491
Tang Liang-an, see Zang Shou-qing 50 (1980) 659
Tareen, J.A.K. and T.R.N. Kutty, Hydrothermal phase equilibria in Ln_2O_3–H_2O–CO_2 systems. I. The lighter lanthanides 50 (1980) 527
Tatarchenko, V.A. and E.A. Brener, Crystallization stability during capillary shaping. I. General theory of capillary and thermal stability 50 (1980) 33
Tatarchenko, V.A., see Babkin 50 (1980) 45
Tatarchenko, V.A., see Satunkin 50 (1980) 133
Tatarchenko, V.A., T.N. Yalovets, G.A. Satunkin, L.M. Zatulovsky, L.P. Egorov and D.Ya. Kravetsky, Defects in shaped sapphire crystals 50 (1980) 335
Taylor, A.S., see Eriss 50 (1980) 200
Temple, H.E., see Kim 50 (1980) 212
Toacsan, M.I., see Nistor 50 (1980) 557
Tropp, E.A., see Antonov 50 (1980) 62

Ushigome, H., see Shigematsu 50 (1980) 801

Vlasenko, L.S., see Bagraev 50 (1980) 764
Vyas, D.D., see Pandya 50 (1980) 870

Wada, K. and K. Hoshikawa, Growth and characterization of sapphire ribbon crystals 50 (1980) 151
Wald, F.V., see Rao 50 (1980) 311
Wang,K.K., see Reddy 50 (1980) 470
Wang Wen, see Zang Shou-qing 50 (1980) 659
Watanabe, M., see Kotake 50 (1980) 743
Watanabe, T., The growth of tetraoxane crystals from acetone solutions 50 (1980) 729
Welter, J.-M., see Beyss 50 (1980) 419
Wen Wang, see Wang Wen 50 (1980) 659
Wilcox, W.R., see Clark 50 (1980) 461
Willoughby, A.F.W., see Fewster 50 (1980) 648

Yalovets, T.N., see Tatarchenko 50 (1980) 335
Yamaguchi, T., see Iwanaga 50 (1980) 552
Yang, K.H., see Ciszek 50 (1980) 160

Yang, K., G.H. Schwuttke and T.F. Ciszek, Structural and electrical characterization of crystallographic defects in silicon ribbons 50 (1980) 301
Yoshiie, T., see Iwanaga 50 (1980) 552
Yoneda, N., see Ito 50 (1980) 767
Yuferev, V.S., see Antonov 50 (1980) 52
Yuferev, V.S., see Antonov 50 (1980) 325
Yuki, R., see Takahashi 50 (1980) 491

Zang Shiou-qing, Tang Liang-an, Wang Wen and Le Shou-hong, The relationship between growth orientation and grain boundary generation in sapphire plate crystals grown by the EFG technique 50 (1980) 659
Zatulovsky, L.M., see Tatarchenko 50 (1980) 335
Zook, J.D. and S.B. Schuldt, Analysis of conditions for high speed growth of silicon sheet 50 (1980) 51
Zook, J.D., B.G. Koepke, B.L. Grung and M.H. Leipold, Supported growth of sheet silicon from the melt 50 (1980) 260
Zoutendyk, J.A., Analysis of forced convection heat flow effects in horizontal ribbon growth from the melt 50 (1980) 83

SUBJECT INDEX

Adsorption 521, 807
Alloys 445, 720
Aluminum 453, 684
– orthophosphate 404
Ammonium
– chloride 831
Apparatus
– for melt growth
– – by Bridgman
– – – of aluminum 684
– – by Czochralski
– – – of cesium cadmium chloride 775
– – – of rare earth aluminum ($REAl_2$) 419
– – – of silicon 437, 865
– – by EFG
– – – of sapphire 8, 143, 151, 659
– – – of silicon 114, 175, 193, 200
– – – capillary shaper for 3
– – – die for 8, 21
– – by floating zone
– – – of sapphire 126
– – by horizontal gradient – freeze method
– – – of gallium arsenide 612
– – by inverted ribbon growth
– – – of silicon 347
– – by inverted Stepanov process
– – – of silicon 212
– – by ribbon-to-ribbon growth
– – – of silicon 236
– – by uniaxial solidification
– – – of silicon 852
– – – through horizontal ribbon growth
– – – – of silicon 247
– for solution growth
– – by low temperature
– – – of ammonium chloride 831
– – – of Rochelle salt 397
– – – of TCNQ derivative 739
– for thin film
– – by vapor phase epitaxy
– – – by chemical vapor deposition
– – – – of cadmium sulphide 491
– for vapor growth
– – by chemical transport
– – – of α-iron(III) oxide 767
– – by evaporation and condensation
– – – of silicon carbide 779
– for miscellaneous
– – infrared photoelastic measurement 743
– – materials for use in silicon crystal growth 366
– – solubility measurement (low temp.) 729
– – susceptor–crucible–lid assembly
– – – for dendritic web growth 221

Bismuth
– molybdate (γ-Bi_2MoO_6) 515
Boron
– phosphide 549
Burton, Cabrera and Frank's (BCF) theory 663

Cadmium
– arsenide 761
– germanium diphosphide 567
– lead fluoride 575
– sulphide 491, 552
Calcium
– carbonate 470
– sulphate dihydrate 533
Capillary stability 33, 45, 94, 160
Carbon 675
Ceramics 783
Cesium
– cadmium chloride 775
Characterization methods
– by angle-lapped metallography 260
– by atomic absorption spectrometry 761
– by Auger electron spectroscopy 260, 485, 873
– by calorimetry 397
– by electrical methods 160, 212, 221, 247, 260, 279, 291, 301, 311, 320, 347, 437, 491, 538, 549, 555, 612, 619, 625, 644, 654, 859
– by electron diffraction 538, 549, 801
– by electron microscopy 143, 212, 236, 260, 279, 301, 335, 347, 445, 470, 509, 538, 549, 552, 571, 581, 605, 612, 654, 675, 801, 865
– by electron probe microanalysis (EPMA) 193, 839, 865
– by electronic microanalysis 761
– by emission spectroscopy 347, 419
– by ESR 739
– by field emission microscopy 521
– by lattice parameters study 648
– by magnetization 419
– by mass spectroscopic analysis 236, 419, 437, 538
– by metallography 419
– by neutron activation analysis 236, 437
– by neutron diffraction 419
– by NMR 739, 764
– by optical microscopy 151, 193, 212, 260, 279, 291, 301,

335, 366, 404, 485, 515, 533, 555, 557, 562, 567, 659, 729, 739, 743, 752, 757, 761, 767, 771, 779, 816, 823, 831, 839, 852
– by optical nuclear polarization 764
– by optical wave guiding 291
– by refractive index measurement 605
– by surface acoustic wave (SAW) 291
– by thermal methods 429, 720, 761
– by transferred electron (TE) photoemission 481
– by transmission 69, 193, 221, 301, 347, 491, 619, 648, 743
– by uv absorption 8
– by γ-ray diffraction 419
– by X-ray techniques 143, 151, 160, 193, 212, 221, 279, 311, 330, 341, 347, 404, 419, 429, 445, 485, 491, 498, 555, 557, 562, 567, 575, 581, 648, 659, 729, 743, 752, 757, 761, 771, 779, 816, 870, 873
Cobalt
– nickel oxide 873
Computer simulation 200, 691
Constitutional supercooling 404
Convection 83, 335, 461, 831, 852
Copper
– indium sulphide 429
– (I) oxide 816

Dendritic growth 8, 221, 236, 404, 831
Diffusional control 397, 521, 581, 663, 701, 729, 823, 831, 859, 865
Dislocations 69, 151, 221, 247, 301, 311, 325, 330, 335, 341, 404, 445, 659, 663, 729, 771. 865
Distribution coefficient 221, 320, 625, 638, 775, 865

Etching
– chemical 212, 221, 247, 301, 311, 330, 341, 404, 419, 552, 557, 581, 654, 767, 852
– ion beam 291
– thermal 779
Eutectic
– alloy 445, 720
– growth 8, 720, 783

Fluid glow 852

Gallium
– aluminum arsenide 877
– arsenide 612, 619, 625, 638, 644, 648, 663, 707, 771, 859, 877
– phosphide 701, 743
Germanium 320, 325
Glycine
– sulphate 870
Gold 485, 571
Grain boundary 260, 279, 301, 335, 341, 659
Graphite 679
Gypsum 533

Heat flow control 21, 33, 51, 62, 69, 83, 102, 114, 175, 221, 247, 260, 279, 325, 397, 453, 461, 684, 691, 783
Hematite 767
Hydroxysodalite 498

Impurity 221, 311, 335, 347, 366, 437, 470, 485, 612, 625, 638, 764, 859, 865, 877
Indium
– antimonide 133
– arsenide 538
– arsenide phosphide 481
– gallium arsenide 481
Interface 21, 51, 83, 126, 133, 143, 151, 175, 221, 247, 260, 335, 397, 445, 571, 729
Iron
– α-oxide (Fe_2O_3) 767
– oxide (Fe_3O_4) 801

Kinetics
– of directional solidification 684
– of growth 21, 94, 102, 114, 200, 221, 247, 404, 470, 481, 498, 533, 581, 605, 663, 701, 707, 729, 771, 801, 807, 831, 865
– of interface control 102, 151, 160, 200
– of nucleation 581, 771
– of sublimation 491
– of transformation 498

Lanthanide oxide–water–carbon dioxide 527
Lattice mismatch 445, 481, 605
Lattice parameter contraction 648
Lead
– magnesium niobate 555
– scandium tantalate 555
Lithium
– niobate 291
– – tantalate 605
– tantalate 291, 757

Magnesium
– oxide 839
– titanate 839
Magnetite 801
Melt growth
– by Bridgeman–Stockbarger
– – of aluminum 453, 684
– – mathematical model for 691
– by capillary action shaping technique (CAST)
– – of silicon 160, 301
– by Czochralski
– – of cesium cadmium chloride 775
– – of gallium arsenide 619, 625
– – of gallium phosphide 743
– – of lithium tantalate 757
– – of rare earth aluminum ($REAl_2$) 419
– – of silicon 21, 437, 764, 865
– – theory of 33, 45

– by dendritic web
– – of silicon 221
– by EFG
– – of germanium 320, 325
– – of indium antimonide 133
– – of sapphire 8, 62, 133, 145, 151, 330, 335, 341, 659
– – of silicon 21, 102, 114, 175, 193, 200, 311
– – theory of 3, 33, 45
– by floating zone
– – of cobalt–nickel oxide 873
– – of copper(I) oxide 816
– – of magnesium oxide 839
– – of magnesium titanate 839
– – of sapphire 126
– – of silicon 21
– – of titanium dioxide 839
– by inverted ribbon growth
– – of silicon 347
– by inverted Stepanov process
– – of silicon 212
– by normal freezing
– – of gold 485
– by ribbon against drop (RAD)
– – of silicon 279
– by ribbon-to-ribbon growth
– – of silicon 236
– by uniaxial solidification
– – of cesium cadmium chloride 775
– – of eutectic alloy (Ni–Al–Cr–C) 445
– – of gallium arsenide 612, 619
– – of silicon 51, 260, 852
– – through horizontal ribbon growth
– – – of silicon 94, 247
– – theory of 783
– by zone melting
– – of cadmium arsenide 761
– – of cadmium lead fluoride 575
– – of silicon 461
– – of zinc arsenide 761
– – theory of 51
Mercuric
– iodide 752
Morphological stability 69, 160, 279, 311, 335, 571
Morphology of growth 21, 69, 126, 160, 221, 236, 311, 335, 341, 470, 485, 521, 552, 562, 605, 654, 675, 729, 752, 757, 767, 771, 779, 801, 823, 831, 852, 870, 877

Nickel
– aluminum–chromium–carbon eutectic alloy 445
Nucleation 498, 521, 533, 707, 720, 801

PBC theory 663, 729
Perfection of crystals 3, 69, 143, 151, 160, 212, 236, 279, 291, 301, 311, 320, 325, 330, 335, 341, 366, 404, 419, 557, 612, 644, 648, 659, 675, 729, 739, 764, 816
Phase diagrams 260, 429, 527, 720, 839
Phenomenological theory 397, 757
Polytypism 779
Potassium 521

Rare earth
– aluminum Laves phases ($REAl_2$) 419
Rochelle salt 397

Sapphire 8, 62, 126, 133, 143, 151, 335, 341, 659
Segregation coefficient 437, 638
Shaped crystal growth
– bibliography (1959–1978) 381
Sialon 366
Silicon 21, 51, 69, 83, 102, 114, 160, 175, 193, 200, 212, 221, 236, 247, 260, 279, 301, 311, 347, 366, 437, 461, 549, 581, 764, 807, 852
– carbide 366, 779
– nitride 347, 366
Silver
– germanium eutectic alloys 720
Solar cells 160, 212, 221, 236, 247, 260, 279, 301, 347, 437
Solid growth
– by recrystallization
– – of silicon 69
Solubility 404
Solution growth
– by flux
– – of cadmium germanium diphosphide 567
– – of lead magnesium niobate 555
– – of lead scandium tantalate 555
– – of zinc selenide 654
– – of zinc sulphide 557
– by gel
– – of tin iodide 562
– by hydrolysis
– – of zirconia 509
– by hydrothermal growth
– – of aluminum orthophosphate 404
– – of γ-bismuth molybdate 515
– – of lanthanide oxide–water–carbon dioxide 527
– by low temperature
– – of ammonium chloride 831
– – of calcium carbonate 470
– – of glycine sulphate 870
– – of gypsum 533
– – of Rochelle salt 397
– – of TCNQ derivative 739
– – of tetraoxane
– – – theory of 729
Stefan problem; moving boundary problem 461
Strain 62, 69, 221, 325, 335, 648, 743
Supercooling, supersaturation 221, 663, 707, 720, 729
Surface energy 133, 571, 729
Surface processes 133, 663
Surface structure 521, 538, 663
Surface tension 94

Tartrate
– potassium sodium 397

TCNQ
– methyl triphenylarsenium 739
Tetraoxane 729
Thermodynamics 133, 200, 581, 638, 644, 663, 720, 729, 807, 823
Thin film
– by liquid phase epitaxy
– – of gallium aluminum arsenide 877
– – of gallium arsenide 771, 877
– – of lithium niobate-tantalate 605
– – through capillary liquid epitaxy (CLE)
– – – of lithium niobate and tantalate 291
– – theory of 707
– by molecular beam epitaxy
– – of gallium arsenide 644
– – of indium arsenide 538
– – theory of 644
– by vapor phase epitaxy
– – by chemical vapor deposition
– – – of boron phosphide 549
– – – of cadmium sulphide 491
– – – of gallium arsenide 859
– – – of gallium phosphide 701
– – – of indium arsenide phosphide 481
– – – of indium gallium arsenide 481
– – of silicon 236, 549, 581, 807
– – of silicon nitride 247
– – by evaporation and condensation
– – – of magnetite 801
– – – of potassium 521
Tin
– (II) iodide 562
– (IV) iodide 562
Titanium
– dioxide 839
Twinning 341

Vapor growth
– by chemical transport
– – of α-iron(III) oxide 767
– – theory of 663
– by evaporation and condensation
– – of cadmium sulphide 552
– – of silicon carbide 779
– – of zinc phosphide 823
Vapor–liquid–solid growth
– of sapphire 126

Whisker growth
– of tetraoxane 729

Zeolite A 498
Zinc
– arsenide 761
– phosphide 823
– selenide 654
– sulphide 557
Zirconia 509